

APPARATUS AND METHOD FOR COMMUNICATING BETWEEN COMPUTER SYSTEMS USING ACTIVE DATASTREAMS

ABSTRACT OF THE DISCLOSURE

Two computer systems communicate with each other using active datastreams
5 that each identify executable code for sending and receiving the corresponding active
datastream, and for performing any processing required by the active datastream. Each
active datastream also includes a unique datastream identifier. When a first computer
system (source) has a request to send to a second computer system (target), the source
computer system creates an active datastream object that represents the request. Once the
10 active datastream object is created, a method on the active datastream object is invoked to
send the active datastream object to the target. A datastream factory on the target reads
the datastream identifier of the transmitted active datastream object, determines from the
datastream identifier the class of active datastream object being received, and creates a
new instance of the class corresponding to the datastream identifier. A datastream
15 receive mechanism on the target is a method on the new instance, which is invoked to
cause the instance to populate itself from the active datastream object received from the
source. Logic for replying to the request may also be provided as one or more methods
defined on the active datastream class.